



Transforming Primary Mental Health Care for Ageing Populations: The THIKA Model for Community-Based Integrative Intervention

Thika Marlina^{1*}, Budi Anna Keliat², Novy H.C Daulima³, Tri Budi W Rahardjo⁴

^{1,4}Universitas Respati Indonesia

^{2,3}Universitas Indonesia

Corresponding Author: Thika Marlina perawathika@yahoo.co.id

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ABSTRACT

This study aimed to develop a community-based holistic integrative mental health intervention model (THIKA) for older adults with depression. A sequential explanatory mixed-method design was applied, involving quantitative identification of depression risk factors among older adults and qualitative exploration of psychosocial needs, followed by expert validation. The model integrates biological, psychological, social, and cultural approaches through five intervention components: self-disclosure, physical activity, social skills, positive behavior cultivation, and mental resilience. The study involved older adults with depression over a 15-week observation period. The results indicate that the THIKA model improves psychosocial development and happiness while reducing depression levels. This model offers a practical framework for strengthening primary mental health care for ageing populations.

INTRODUCTION

Population ageing has become a global phenomenon and presents significant challenges for health systems, particularly in mental health services. Indonesia is currently experiencing a demographic transition marked by an increasing elderly population, projected to reach 23% by 2050 (BPS, 2017). Alongside this trend, the burden of mental health problems among older adults continues to rise. Depression is one of the most common mental disorders, affecting approximately 280 million people globally, including 5.7% of older adults (World Health Organization, 2021). In Indonesia, the prevalence of depression among older adults is reported at 7.7%, higher than in younger populations. This condition is often exacerbated by comorbid chronic diseases, functional decline, and psychosocial stressors, which significantly affect quality of life and increase the risk of suicide among the elderly (Aihara et al., 2011; Keliat et al., 2019).

Despite the growing burden, mental health services for older adults in primary health care settings remain fragmented and largely focused on physical health. Existing screening tools, such as the Geriatric Depression Scale (GDS) and Abbreviated Mental Test (AMT), are available but are not optimally utilized for follow-up interventions. In many cases, screening results are not translated into appropriate actions, and patients are directly referred to hospitals without receiving initial mental health support at the primary care level. Community-based services, including Posyandu and family empowerment programs, also tend to prioritize physical health, leaving psychosocial and mental health needs insufficiently addressed (Rekawati et al., 2019). This indicates a critical gap in the integration of mental health services within primary care and community settings.

Previous studies have highlighted various determinants and interventions related to depression in older adults, including the role of psychosocial development (Brown & Lewis, 2003), happiness and quality of life (Marliana et al., 2021), and the importance of integrated care approaches (Sum et al., 2023). However, existing interventions are often partial, focusing on single dimensions such as psychological therapy or physical health, and lack a comprehensive integrative framework that combines biological, psychological, social, and cultural aspects. Furthermore, there is limited evidence on community-based intervention models that actively involve caregivers, cadres, and multidisciplinary health workers in addressing depression among older adults. Therefore, a research gap exists in the development of a holistic and integrative mental health intervention model that is practical, accessible, and applicable within primary health care systems.

Based on these gaps, this study aims to develop a community-based holistic integrative mental health intervention model, known as the THIKA Model, for older adults with depression. The model is designed using a mixed-method approach that integrates empirical findings on risk factors, psychosocial needs, and service gaps, as well as theoretical frameworks such as stress adaptation, transition, and uncertainty theories. The development of this model is expected to provide a structured and evidence-based framework for delivering mental health interventions in primary care and community settings.

This study contributes both theoretically and practically. Theoretically, it enriches the development of mental health nursing and gerontological care by integrating multidimensional approaches into a single comprehensive model. Practically, the THIKA Model offers an applicable framework for health workers, caregivers, and community cadres to improve the psychosocial development, happiness, and mental health outcomes of older adults with depression. In addition, the model supports the transformation of primary mental health care services toward a more integrated, community-based, and accessible system for ageing populations.

LITERATURE REVIEW

Depression and Loneliness in Older Adults

Depression in older adults is a complex mental health condition characterized by persistent sadness, impaired functioning, and decreased quality of life (Sadock, 2018). One of the key psychosocial factors contributing to depression is loneliness, defined as a subjective experience of feeling disconnected from others. Loneliness often manifests as feelings of emptiness and social withdrawal, particularly among older adults who experience loss, reduced social roles, or limited interaction (Marliana et al., 2020). This condition not only exacerbates emotional distress but also contributes to the deterioration of mental and physical health. The interaction between loneliness and depression highlights the need for interventions that address both emotional and social dimensions of mental health in ageing populations.

H1: *Loneliness is positively associated with the severity of depression among older adults.*

Mental Health and Quality of Life in Depressed Older Adults

Mental health in older adults cannot be understood as a single-dimensional construct but rather as a multidimensional condition influenced by biological, psychological, and social factors (Luo et al., 2022). Previous studies have shown that quality of life (QoL) in older adults with depression is affected by several determinants, including psychosocial developmental achievement, religious beliefs, chronic illness, life satisfaction, and self-care abilities (Marliana et al., 2021). When these factors are not optimally fulfilled, older adults are more likely to experience decreased well-being and increased vulnerability to depression. Therefore, interventions that aim to improve mental health must incorporate strategies that enhance both functional and psychosocial capacities.

H2: *Mental health status significantly influences the quality of life of older adults with depression.*

Happiness as a Protective Factor in Elderly Mental Health

Happiness is considered a key protective factor in mental health, particularly among older adults. It is defined as a combination of positive emotions, low negative affect, and overall life satisfaction (Zhang et al., 2018). In the context of ageing, happiness emerges from the ability to achieve personal goals, maintain meaningful relationships, and cultivate positive values in daily life. Older adults who experience higher levels of happiness tend to demonstrate better coping mechanisms, resilience, and psychological well-being. Conversely, low levels of happiness are associated with increased depressive symptoms. This highlights the importance of integrating happiness-oriented interventions into mental health programs for older adults.

H3: *Higher levels of happiness are associated with lower levels of depression among older adults.*

The Importance of Holistic and Integrative Mental Health Interventions

Mental health support for older adults with depression is essential to optimize psychosocial development, reduce emotional distress, and enhance life meaning. Traditional interventions often focus on single aspects, such as pharmacological or psychological treatment, without addressing the broader context of ageing. However, recent approaches emphasize the importance of holistic and integrative interventions that combine biological, psychological, social, and cultural dimensions. In addition, the development of technology-based interventions has increased accessibility and efficiency in delivering mental health services to older populations (Marliana et al., 2022). These integrative approaches are particularly relevant in primary health care settings, where resources are limited but community engagement is strong.

H4: *Holistic integrative interventions are more effective in improving mental health outcomes among older adults with depression compared to single-dimension approaches.*

The Need for a Community-Based Integrative Model (THIKA)

Despite advances in mental health research, there is still a lack of comprehensive models that integrate multiple dimensions of care and involve community stakeholders. Existing services are often fragmented and do not fully address the complex needs of older adults with depression. A community-based approach that involves caregivers, health workers, and mental health cadres is essential to ensure accessibility, continuity of care, and sustainability of interventions. The THIKA Model is developed to fill this gap by integrating psychosocial development, happiness enhancement, and resilience-building strategies into a structured intervention framework. This model aligns with the need for transforming primary mental health care into a more inclusive, accessible, and integrative system for ageing populations .

H5: *A community-based integrative model (THIKA) improves psychosocial development, happiness, and reduces depression among older adults.*

METHODOLOGY

Research Design and Approach

This study employed a mixed-method approach using a sequential explanatory design, which integrates quantitative and qualitative methods to develop a comprehensive intervention model. The quantitative phase was conducted to identify risk factors, symptoms, and determinants of depression among older adults, while the qualitative phase aimed to explore psychosocial needs, protective factors, and mental health service gaps. This approach allows for deeper interpretation of statistical findings through contextual understanding (Creswell & Creswell, 2023; Feters & Molina-Azorin, 2020). The mixed-method design is particularly suitable for model development studies in health research, as it enables the integration of empirical data and contextual insights to produce a valid and applicable intervention framework (Plano Clark & Ivankova, 2021).

Population and Sampling

The population in the quantitative phase consisted of older adults aged ≥ 60 years in community and primary health care settings. A total of 452 older adults participated, selected using a non-probability sampling technique (purposive sampling) based on inclusion criteria: (1) diagnosed or screened with depressive symptoms, (2) able to communicate effectively, and (3) willing to participate. This sampling approach was chosen to ensure that participants met the specific characteristics relevant to the study objectives (Etikan & Bala, 2020). In the qualitative phase, 27 participants were involved, consisting of:

- a. 14 older adults with depression and their family members.
- b. 7 health workers and policymakers.
- c. 6 community cadres and professional representatives.

Participants were selected using purposive and snowball sampling to obtain rich and diverse perspectives regarding mental health needs and services for older adults. The sample size was considered adequate based on data saturation principles in qualitative research (Hennink & Kaiser, 2022).

Data Collection Techniques and Instruments

Data collection was conducted using multiple techniques:

1. Quantitative Data Collection
 - a. Quantitative data were collected using standardized screening instruments:
 - b. Geriatric Depression Scale (GDS) to measure depression levels
 - c. Abbreviated Mental Test (AMT) to assess cognitive status
 - d. P3G (Geriatric Assessment Instrument) to identify physical and mental health conditions
 - e. These instruments have been widely validated and used in geriatric mental health research (Yesavage et al., 1983; De Craen et al., 2020). Validity and reliability were ensured through prior validation studies and internal consistency testing (Cronbach's $\alpha > 0.70$).

2. Qualitative Data Collection

Qualitative data were collected through:

- a. In-depth interviews.
- b. Focus group discussions (FGDs).
- c. Field observations.

The interview guidelines were developed based on literature related to depression, psychosocial development, and elderly well-being. The qualitative approach aimed to explore:

- a. Psychosocial risk factors.
- b. Happiness protective factors.
- c. Barriers and needs in mental health services.

Research Procedure

The research was conducted in several stages:

Stage 1: Quantitative Phase

- a. Screening of depression among older adults.
- b. Identification of predisposing and precipitating factors.
- c. Analysis of symptoms and mental health conditions.

Findings showed that 67.5% of older adults experienced emotional mental disorders, with significant associations between mental status, comorbidities, and depression

Stage 2: Qualitative Phase

- a. Conducting interviews and FGDs.
- b. Exploring psychosocial experiences (e.g., loneliness, empty nest syndrome, anxiety).
- c. Identifying protective factors such as happiness, love language, and self-healing.

Stage 3: Model Development

The THIKA model was developed through:

- a. Integration of quantitative and qualitative findings.
- b. Synthesis of theoretical frameworks: stress adaptation theory, transition theory, uncertainty in illness theory.
- c. Expert validation involving mental health professionals.

Stage 4: Model Implementation (Pilot)

The intervention was implemented over a 15-week period, involving:

- a. Older adults.
- b. Health workers.
- c. Family members.
- d. Community cadres.

The intervention included five components:

- a. Self-disclosure.
- b. Physical activity.
- c. Social skills.
- d. Positive behavior.
- e. Mental resilience.

Data Analysis Techniques

1. Quantitative Analysis

Quantitative data were analyzed using:

- a. Descriptive statistics (frequency, percentage, mean)
- b. Inferential analysis (correlation and regression analysis)

Statistical analysis was conducted using SPSS software version 25, with significance level set at $p < 0.05$. These methods are commonly used in mental health research to identify relationships between variables (Field, 2020).

2. Qualitative Analysis

Qualitative data were analyzed using thematic analysis, following steps:

- a. Data transcription.
- b. Coding.
- c. Categorization.
- d. Theme development.

This approach allows for systematic identification of patterns and meanings from participants' experiences (Braun & Clarke, 2021).

Integration Analysis

The final stage involved integrating quantitative and qualitative findings to construct the THIKA model. This integration enhances the validity and applicability of the model in real-world settings (Fetters & Molina-Azorin, 2020).

RESEARCH RESULT

Empirical Foundations of the THIKA Model Development

The development of the THIKA Model was grounded in a comprehensive integration of quantitative and qualitative findings obtained through a sequential explanatory mixed-method approach. The quantitative phase revealed that a significant proportion of older adults experienced emotional mental disorders characterized by persistent fatigue, feelings of emptiness, and low self-worth. These symptoms were not isolated but interconnected, forming a pattern that reflects the complex nature of depression in later life. The presence of loneliness, emotional withdrawal, and social disconnection emerged as dominant underlying conditions that intensified depressive symptoms.

These findings provide strong empirical support for H1, which posits that loneliness is positively associated with the severity of depression among older adults. The quantitative evidence demonstrates that emotional isolation is not only a contributing factor but also a reinforcing mechanism that exacerbates depressive conditions over time. Older adults who reported limited social interaction and feelings of abandonment were more likely to experience deeper levels of depression, indicating the critical need for interventions that address emotional connectivity.

Furthermore, the quantitative results highlighted the influence of mental health status, functional capacity, and comorbid physical conditions on overall well-being. Older adults with impaired mental status and declining functional ability showed a significant reduction in their quality of life. These findings confirm H2, indicating that mental health status significantly influences the quality of life of older adults with depression. The interplay between physical and psychological conditions suggests that depression cannot be treated in isolation but must be addressed within a broader health context.

The qualitative phase provided deeper insights into the lived experiences of older adults, revealing psychosocial stressors such as empty nest syndrome, unresolved life regrets, social anxiety, and lack of appreciation throughout life stages. At the same time, protective factors such as happiness, meaningful relationships, love expression, and self-healing practices emerged as essential elements that support emotional recovery. These findings validate H3, which states that higher levels of happiness are associated with lower levels of depression. Happiness was not merely an emotional state but functioned as a resilience mechanism that enabled older adults to cope with adversity.

In addition, the findings clearly indicate that existing mental health services are fragmented and insufficient in addressing the multidimensional needs of older adults. Participants emphasized the importance of integrated, accessible, and community-based interventions that combine physical, psychological, and social support. This reinforces H4, demonstrating that holistic integrative interventions are more effective than single-dimension approaches. The need for a comprehensive model that bridges clinical care and community support became evident through both quantitative and qualitative findings.

Based on this comprehensive evidence, the THIKA Model was developed as an integrative framework that combines individual interventions with community-based support systems. The model addresses not only the symptoms of depression but also its underlying determinants and contextual factors. This finding confirms H5, indicating that a community-based integrative model improves psychosocial development, enhances happiness, and reduces depression among older adults.

Conceptual Architecture of the THIKA Model

The THIKA Model represents a transformative framework for mental health care in ageing populations by integrating biological, psychological, social, and cultural dimensions into a unified system. Unlike conventional interventions that focus on isolated aspects of mental health, this model emphasizes interconnected processes that operate simultaneously at the individual and community levels.

The conceptual architecture of the model reflects a dynamic interaction between internal capacities of older adults and external support systems. At the individual level, the model focuses on strengthening emotional regulation, physical health, social engagement, and psychological resilience. At the community level, it integrates the roles of health workers, caregivers, and mental health cadres to ensure continuous and accessible support. This dual-level

approach ensures that interventions are both personalized and contextually relevant.

Before presenting the visual representation, it is important to understand that the model is not static but adaptive, allowing for adjustments based on the needs and conditions of older adults. The structure of the model illustrates how intervention components are interconnected and contribute collectively to improving mental health outcomes.

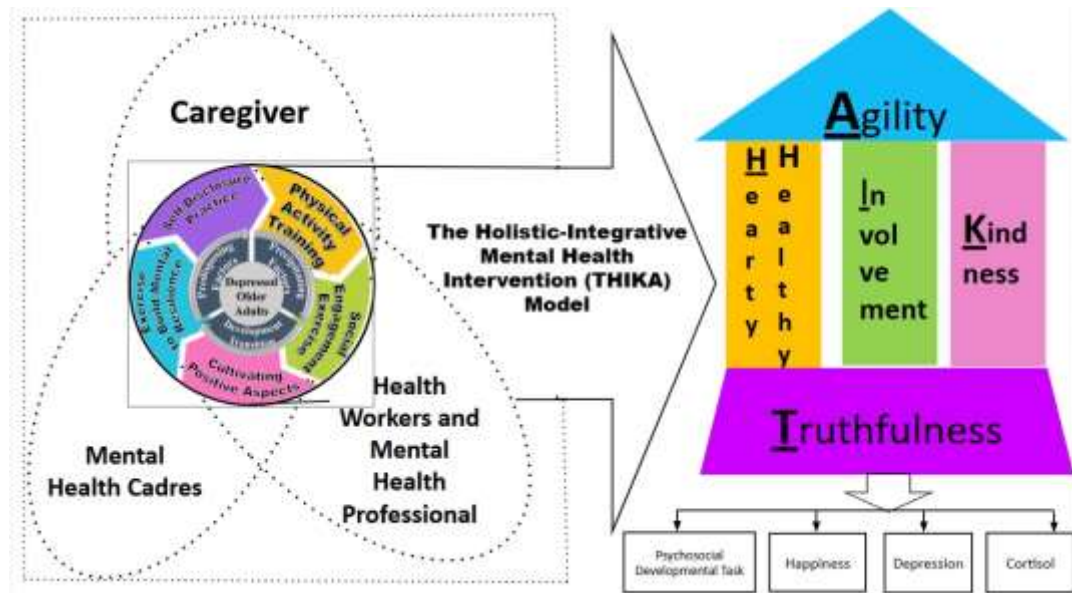


Figure 1. The THIKA Model: A Community-Based Holistic Integrative Mental Health Intervention for Older Adults with Depression

The figure illustrates the systemic relationship between intervention components, stakeholders, and outcomes, highlighting the integrative nature of the THIKA Model in addressing depression among older adults.

Mechanisms of Change: Core Intervention Components

The effectiveness of the THIKA Model lies in its five core intervention components, which function as mechanisms of change targeting different dimensions of depression. These components are implemented over a 15-week period, allowing sufficient time for behavioral, emotional, and cognitive transformation. Self-disclosure practice plays a central role in addressing emotional suppression and psychological distress. Older adults are encouraged to express their thoughts, emotions, and life experiences, which helps reduce feelings of loneliness and internalized stress. This mechanism directly addresses H1, as it counteracts emotional isolation and fosters interpersonal connection.

Physical activity management serves as a biological and behavioral intervention that improves physical health and reduces symptoms such as fatigue and lethargy. By enhancing physical functioning, this component contributes to improved mental health and overall quality of life, thereby supporting H2. The integration of physical activity also reflects the interdependence between physical and psychological well-being.

Social skills training focuses on rebuilding social competence and reducing barriers to interaction. Older adults are guided to develop communication skills, engage in group activities, and rebuild social networks. This component enhances social participation and supports emotional well-being, contributing to increased happiness and confirming H3. Cultivating positive aspects emphasizes the development of positive thinking, gratitude, and life meaning. Through structured activities, older adults learn to reinterpret life experiences, focus on strengths, and develop a sense of purpose. This component strengthens positive emotional states and reduces vulnerability to depression. Mental resilience strengthening focuses on enhancing adaptive coping mechanisms and the ability to manage stress and uncertainty. Older adults are supported in developing cognitive flexibility and emotional regulation, enabling them to navigate life transitions more effectively. This component reflects the holistic nature of the model and reinforces H4, demonstrating the importance of integrative interventions.

Collaborative Ecosystem: Stakeholders in THIKA Implementation

The THIKA Model is implemented within a collaborative ecosystem that involves multiple stakeholders, ensuring that mental health interventions are accessible, continuous, and sustainable. Health workers play a primary role in delivering interventions, conducting assessments, and coordinating care. Their involvement ensures that the model is implemented in accordance with clinical standards and integrated into primary health care services. Mental health cadres function as community facilitators who provide ongoing support, monitor progress, and encourage participation among older adults. Their presence within the community enhances accessibility and bridges the gap between formal health services and community needs.

Caregivers and family members play a crucial supportive role by reinforcing intervention outcomes in daily life. They provide emotional support, assist with activities, and create a conducive environment for behavioral change. The involvement of these stakeholders ensures that the intervention extends beyond clinical settings and becomes part of the daily lives of older adults. This collaborative approach reflects the community-based nature of the model and strengthens the integration between primary health care and community resources, making the intervention more effective and sustainable.

Transformative Outcomes: Psychosocial and Clinical Impact

The implementation of the THIKA Model resulted in significant improvements across multiple domains, reflecting its effectiveness as a holistic intervention. The model emphasizes five key outcome domains, namely Truthfulness, Hearty-healthy, Involvement, Kindness, and Agility, which collectively represent the transformation of older adults' psychosocial and behavioral functioning. Truthfulness reflects increased openness and emotional expression, indicating improved self-awareness and psychological healing. Hearty-healthy represents improvements in physical health and lifestyle behaviors, demonstrating the impact of physical activity interventions. Involvement indicates increased participation in social and community activities,

reflecting reduced social isolation. Kindness represents the development of positive attitudes and prosocial behaviors, while Agility reflects enhanced resilience and adaptability in facing life challenges. In addition to these conceptual outcomes, the intervention demonstrated measurable impacts, including improved psychosocial development, increased happiness, and reduced levels of depression over the 15-week period. These findings indicate that the THIKA Model effectively addresses both the symptoms and underlying causes of depression, providing a balanced approach between recovery and well-being enhancement.

Strategic Implications for Primary Mental Health Care Transformation

The findings of this study highlight the potential of the THIKA Model as a strategic framework for transforming primary mental health care for ageing populations. The model addresses the limitations of fragmented services by providing an integrated approach that combines clinical, psychosocial, and community-based interventions. By emphasizing collaboration among stakeholders and focusing on holistic well-being, the model supports the transition from a disease-centered approach to a person-centered care system. It also enhances the accessibility of mental health services by integrating them into community settings, making them more responsive to the needs of older adults. Ultimately, the THIKA Model provides a practical and scalable solution for improving mental health outcomes among older adults. Its implementation has the potential to strengthen primary health care systems, reduce the burden of depression, and promote healthy and active ageing.

DISCUSSION

The findings of this study indicate that H1 is supported, as the reduction in depression among older adults in the THIKA model occurred alongside decreased loneliness, increased self-disclosure, and improved social connections. From a conceptual perspective, these findings are consistent with theories of mental health in older adults, which identify social isolation as a key determinant of psychological disorders, making socially oriented interventions highly relevant (Santini et al., 2020). The results are also consistent with national research by Putri et al. (2022), which demonstrated a significant relationship between loneliness and depression among older adults, and are further supported by international findings from Santini et al. (2020), which show that social disconnection increases the risk of depression and anxiety. The difference lies in the fact that previous studies primarily focused on identifying the relationship between loneliness and depression, whereas this study translates these findings into concrete interventions through self-disclosure practices and social skills training. Thus, this study extends the understanding of loneliness not only as a risk factor but also as a modifiable condition through community-based interventions.

The results also demonstrate that H2 is supported, as improvements in mental health among older adults were closely associated with enhanced daily functioning and quality of life. These findings align with the concept of healthy ageing, which emphasizes that mental health, functional capacity, and quality of life are interrelated and should be addressed as an integrated system (Beard et al., 2021). International research by Feng et al. (2021) indicates that physical functional limitations are associated with increased depression, while national research by Sari et al. (2023) highlights that quality of life among older adults is influenced by both physical and psychological health conditions. Differences with some previous cross-sectional studies can be explained by the fact that this study implemented a 15-week intervention that actively modified psychosocial conditions. Therefore, the key contribution of this study lies in demonstrating that quality of life among older adults with depression can be improved through integrated interventions rather than symptom-focused treatment alone.

The findings further reveal that H3 is supported, as increased happiness contributed to the reduction of depression among older adults. From the perspective of subjective well-being theory, happiness is understood as an interaction between positive emotions, life satisfaction, and meaning in life, functioning as a protective factor against mental disorders (Diener et al., 2020). These findings are supported by national research by Rahmawati et al. (2022), which found a negative relationship between happiness and depression among older adults, as well as by international research by Steptoe (2021), which demonstrated that happiness enhances psychological resilience in later life. The key difference in this study is that happiness is not only positioned as an outcome but also as an intervention target through positive behavior cultivation and social engagement. This indicates that happiness can function as an active mechanism of change in mental health interventions. Therefore, the THIKA model contributes to advancing geriatric mental health nursing by integrating happiness into intervention strategies.

Furthermore, the findings confirm that H4 is supported, indicating that holistic integrative interventions are more effective than single-dimension approaches in addressing depression among older adults. This is consistent with the concept of person-centered integrated care, which emphasizes the importance of addressing biological, psychological, and social aspects simultaneously (World Health Organization, 2021). International research by Briggs et al. (2020) shows that integrated approaches improve health outcomes among older adults, while national research by Nugroho et al. (2022) highlights the importance of community-based health services in improving mental health. The difference is that the THIKA model offers a more structured and operational framework by integrating five intervention components into a unified system. This demonstrates that intervention effectiveness increases when multiple dimensions of health are addressed simultaneously. Therefore, this study reinforces the relevance of integrative approaches in managing depression among older adults.

Finally, the results indicate that H5 is supported, as the THIKA model effectively improved psychosocial development and happiness while reducing depression levels. These findings are consistent with the concept of community-based mental health care, which emphasizes the involvement of families and communities in mental health interventions (Patel et al., 2022). National research by Wahyuni et al. (2023) shows that family and community support significantly influence the success of mental health interventions among older adults, while international research by Patel et al. (2022) highlights the effectiveness of community-based services in improving access and sustainability of care. Factors contributing to the success of this model include multi-stakeholder involvement, adequate intervention duration, and the integration of complementary components. However, variations in health conditions and family support may influence intervention outcomes. Therefore, this study provides an important contribution by offering a practical intervention model that can transform primary mental health care into a more integrative and older adult-centered system.

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that the THIKA Model is an effective community-based holistic integrative mental health intervention for older adults with depression. The model successfully integrates biological, psychological, social, and cultural approaches through five core components, resulting in improved psychosocial development, increased happiness, and reduced depression levels. The 15-week implementation demonstrates that structured and collaborative interventions can address both the causes and impacts of depression among older adults. It is recommended that the THIKA Model be applied in primary health care and community settings to strengthen mental health services for ageing populations. Health workers, caregivers, and community cadres should be actively involved to ensure sustainability and effectiveness of the intervention. In addition, integration with digital health platforms is encouraged to enhance accessibility and continuity of care.

ADVANCED RESEARCH

This study has limitations, including the use of a specific population and limited generalizability to broader settings. Future research is recommended to test the effectiveness of the THIKA Model in different regions, larger populations, and diverse cultural contexts. Further studies may also explore long-term outcomes and the integration of technology-based interventions to enhance scalability.

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